

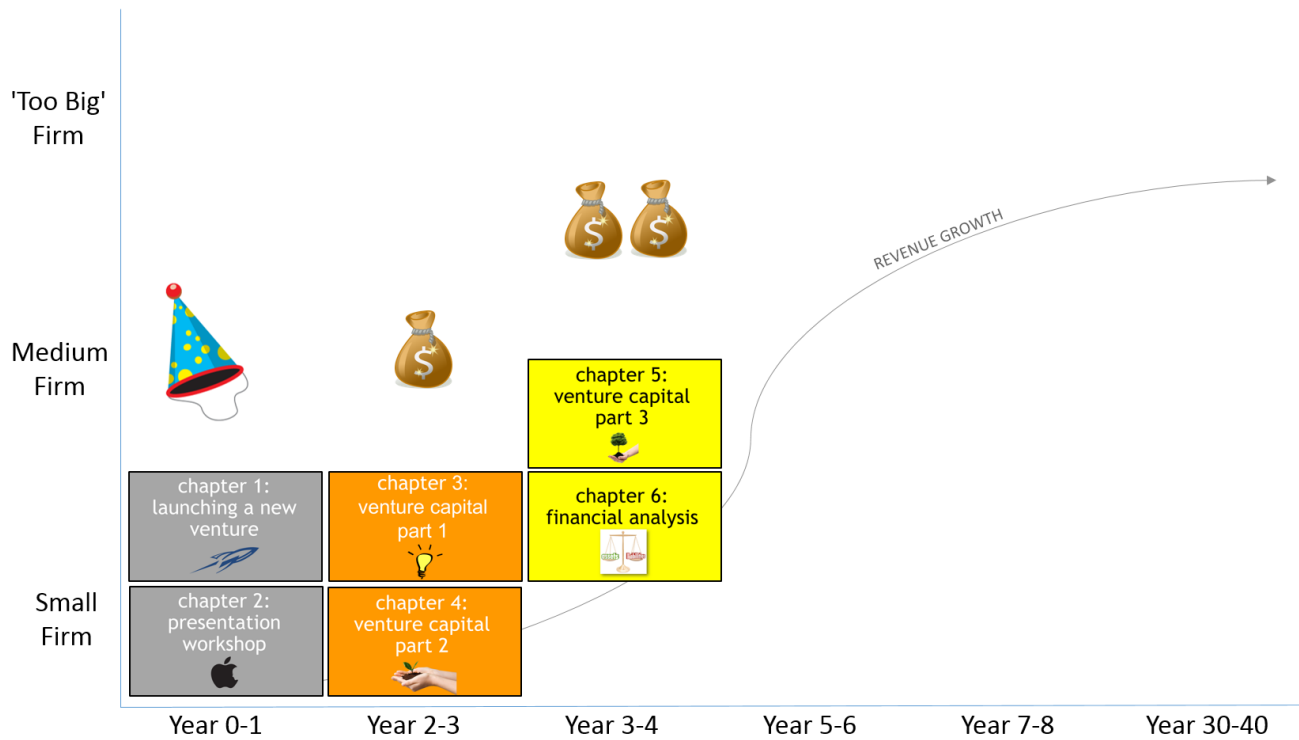
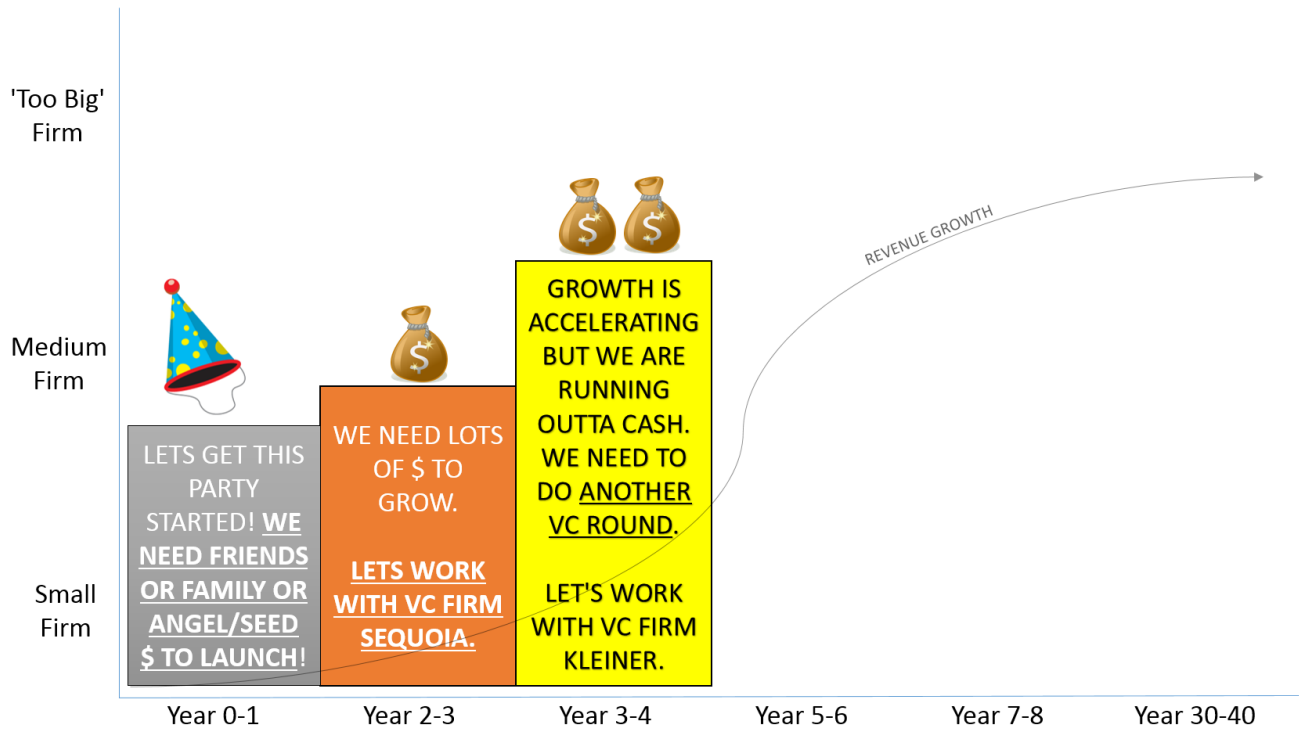
CHAPTER 6: FINANCIAL ANALYSIS

“The biggest risk is not taking any risk... in a world that is changing really quickly, the only strategy that is guaranteed to fail is not taking risks.”

- Mark Zuckerberg

chapter 6: financial analysis





confidence



“confidence is contagious. so is
lack of confidence.”

-vince lombardi

The most successful entrepreneurs are exceptionally confident. They didn’t always start out this way, but over time they learned to develop confidence and eventually learned how to stay in this peak mental confident state, especially when presenting in business.

Whether or not you think you can do it, you are right! www.tiny.cc/chris56

UNDERSTANDING FINANCIAL STATEMENTS THE EASY WAY

Ok. Next topic we will discuss is financial analysis and accounting.

please don’t memorize
accounting or finance.

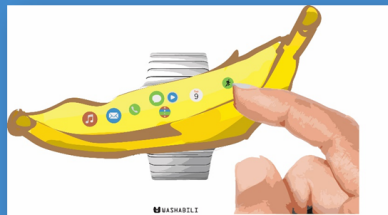
understand it.

The first time I took accounting during my undergraduate business degree at McGill University, I got a D and I had to retake the course. Why did I get a D? Because I was fresh out of high school and I did well in high school because I memorized stuff. In university and in business, you need to *understand* concepts, not memorize them. As such, I want you to understand finance and accounting concepts. Understand why math formulas are the way they are in finance and accounting and I promise you that you will excel and enjoy the finance and accounting process.

Your company is getting closer to an IPO. In addition to Point of Sale Terminals you decide to start also selling watches. “Banana Watch” is your product. You want to sell them in all 50 states in the US.

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introducing banana watch

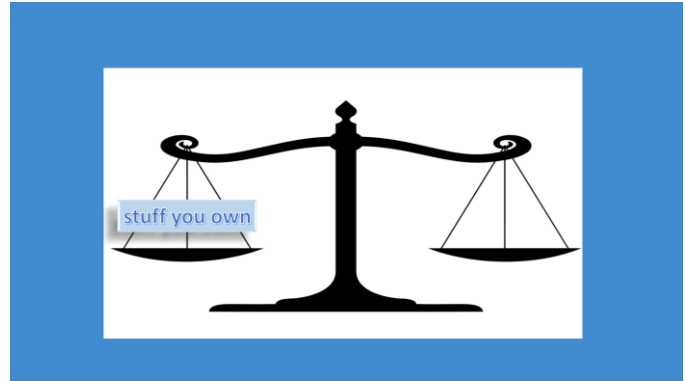
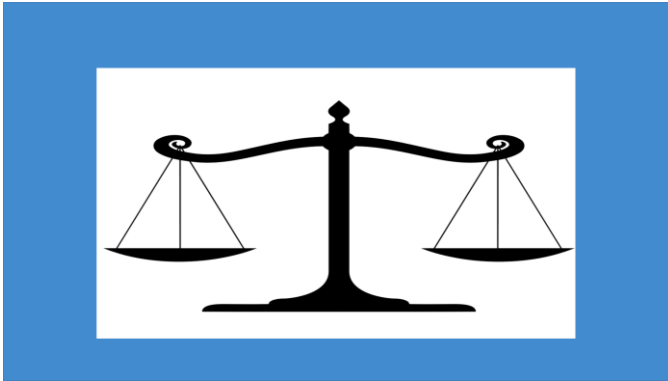


There are 3 financial statements we need to understand. Don't worry, we won't go into too much detail. Why? Because we use software in this century to actually create financial statements for us! That's right the Internet and software programs do accounting stuff for us. Heck if we don't call taxis to pick us up this century but we use Uber, then why can't we also simplify the accounting process? We will. In fact, I don't want you to create financial statements ever again after reading this book. Instead, find your favorite software package like QuickBooks from Intuit and just insert "money spent" and "money not spent" into those programs! I told you this is a modern business book!

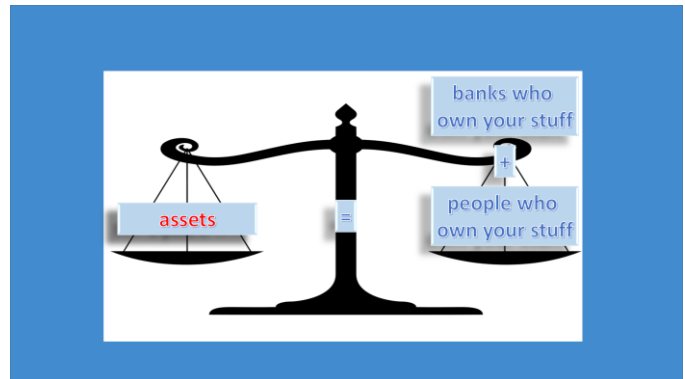
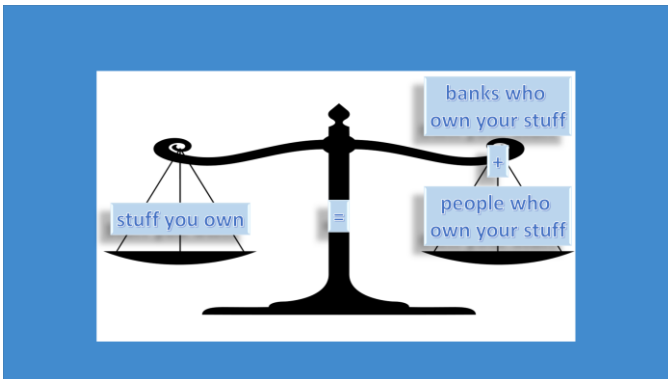
As with all concepts in business, understand why they are called what they are called! Say what Chris? There are 3 financial statements we will learn aboooooot (my Canadian again for about). They are as follows:

- 1: '**Balance Sheet**': think of an old scale that balances stuff....this tells you what you own and who owns that stuff (you, your investors or a bank).
- 2: '**Income Statement**': this tells you how much money or income you make after you subtract the money it cost you to sell a product or service.
- 3: '**Cash Flow Statement**': for some reason the income statement records expenses that you deduct that aren't cash out of your pocket expenses. Why? It's cool because it does this to make sure you pay less taxes. Huh? Well if you buy a car and it starts getting old, then you can 'depreciate' it so you can deduct part of the wear and tear of the car to reduce how much tax you have to pay. Don't worry, we will cover all this stuff in a bit more detail.

BALANCE SHEET



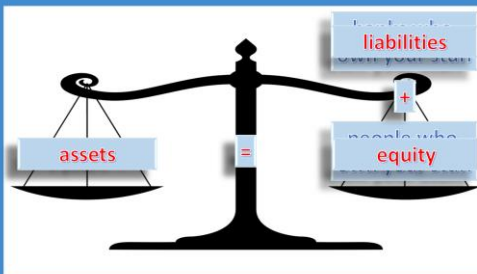
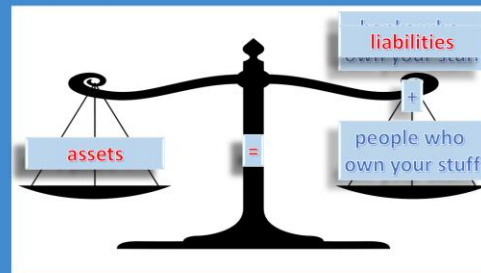
Why is it called a balance sheet again? Because stuff you own is owned by you, an investor in your company or a bank. Why do I even need to care about the balance sheet anyway? Because it tells you exactly what you own and who else owns your stuff. The left side of the balance scale must equal the right side of the balance scale. Why? Because someone owns all of the stuff in your company – it's either you or your investors or a bank. The balance sheet keeps track of who owns stuff!



On the right side of the scale or balance sheet is the offsetting or balancing side. The right side is just telling you who owns your stuff....it can be you or other people (including yourself) or banks/companies that lend you money like credit card companies etc.

There is a left side and a right side of the balance sheet. The left side is stuff you own. This is called 'assets'. Capiche?

On the right side of the balance sheet you have 2 claims or 2 groups that claim they own your assets. The first group is called liabilities or banks (and other groups) that you owe money too. So liabilities is people you owe money to and includes your employees or credit card companies etc.



Well the banks don't own all of your stuff. Credit card companies don't own all of your stuff either. Say you buy a car for \$10k with a \$10k bank loan. The \$10k car is an asset which you put on the left side of the scale. Then in order to make sure the scale remains balanced, then on the right side you include the bank loan for the car. The scale always has to be balanced because all of your stuff is either

owned by people you owe money to or people that own your company (including you). Chris why is this statement even necessary? Because you will forget who you owe money to if you don't have a balance sheet.

Assets		Liabilities and Equity	
Cash + Stuff We Can Turn to <\$1y	\$60k	Bills we have to Pay	\$20k
Stuff Owed to Us	\$0k	Wages We Have to Pay	\$0k
Inventory	\$20k	Loans due in <1 year	\$0k
		Other Current Liabilities	\$0k
Total Current Assets	\$80k	Total Current Liabilities	\$20k
Equipment	\$40k	Debt owed in >1 year	\$20k
Less: Wear and Tear on it	\$0k	Leases (equipment rented)	\$0k
Equipment minus wear and tear	\$40k	Total Long Term Liabilities	\$20k
Building	\$0k		
Other Long-Term Assets	\$0k	Equity (\$ of company we own)	\$80k
Total Assets	\$120k	Total Liabilities + Equity	\$120k

See how the left side (assets) has to equal the right side (liabilities + equity)?

Assets		Liabilities and Equity	
current assets = stuff you can sell in less than one year		Bills we have to Pay	\$20k
		Wages We Have to Pay	\$0k
		Loans due in <1 year	\$0k
		Other Current Liabilities	\$0k
Total Current Assets	\$80k	Total Current Liabilities	\$20k
Equipment	\$40k	Debt owed in >1 year	\$20k
Less: Wear and Tear on it	\$0k	Leases (equipment rented)	\$0k
Equipment minus wear and tear	\$40k	Total Long Term Liabilities	\$20k
Building	\$0k	Equity (\$ of company we own)	\$80k
Other Long-Term Assets	\$0k	Total Liabilities + Equity	\$120k
Total Assets	\$120k		

Assets		Liabilities and Equity	
current assets = stuff you can sell in less than one year		Bills we have to Pay	\$20k
		Wages We Have to Pay	\$0k
		Loans due in <1 year	\$0k
		Other Current Liabilities	\$0k
Total Current Assets	\$80k	Total Current Liabilities	\$20k
long term assets = stuff you can't sell in less than one year		Debt owed in >1 year	\$20k
		Leases (equipment rented)	\$0k
		Total Long Term Liabilities	\$20k
Other Long-Term Assets	\$0k	Equity (\$ of company we own)	\$80k
Total Assets	\$120k	Total Liabilities + Equity	\$120k

Let's build on this concept. Current assets are assets you can sell or liquidate in less than a year like cash or bonds you own.

Assets		Liabilities and Equity	
current assets = stuff you can sell in less than one year		Bills we have to Pay	\$20k
		Wages We Have to Pay	\$0k
		Loans due in <1 year	\$0k
		Other Current Liabilities	\$0k
Total Current Assets	\$80k	Total Current Liabilities	\$20k
long term assets = stuff you can't sell in less than one year		Debt owed in >1 year	\$20k
		Leases (equipment rented)	\$0k
		Total Long Term Liabilities	\$20k
Other Long-Term Assets	\$0k	Equity (\$ of company we own)	\$80k
Total Assets	\$120k	Total Liabilities + Equity	\$120k

Assets		Liabilities and Equity	
current assets = stuff you can sell in less than one year		current liabilities = debt you owe in less than one year	
		Total Current Liabilities	\$20k
		Debt owed in >1 year	\$20k
		Leases (equipment rented)	\$0k
		Total Long Term Liabilities	\$20k
Total Current Assets	\$80k	Equity (\$ of company we own)	\$80k
long term assets = stuff you can't sell in less than one year		Total Liabilities + Equity	\$120k
Other Long-Term Assets	\$0k		
Total Assets	\$120k		

Stuff that likely takes you more than a year to sell is called long term assets, like a building which can take >1 year to sell. Similarly, stuff you owe in under a year like credit cards or short term loans are called current liabilities.

Assets		Liabilities and Equity	
current assets = stuff you can sell in less than one year		current liabilities = debt you owe in less than one year	
		long term liabilities=>1 year	
Total Current Assets	\$80k	Total Current Liabilities	\$20k
long term assets = stuff you can't sell in less than one year		Total Long Term Liabilities	\$20k
		Equity (\$ of company we own)	\$80k
Other Long-Term Assets	\$0k	Total Liabilities + Equity	\$120k
Total Assets	\$120k		

Assets		Liabilities and Equity	
current assets = stuff you can sell in less than one year		current liabilities = debt you owe in less than one year	
		long term liabilities=>1 year	
		equity = peeps who own it!	
Total Current Assets	\$80k	Total Current Liabilities	\$20k
long term assets = stuff you can't sell in less than one year		Total Long Term Liabilities	\$20k
		Equity (\$ of company we own)	\$80k
Other Long-Term Assets	\$0k	Total Liabilities + Equity	\$120k
Total Assets	\$120k		

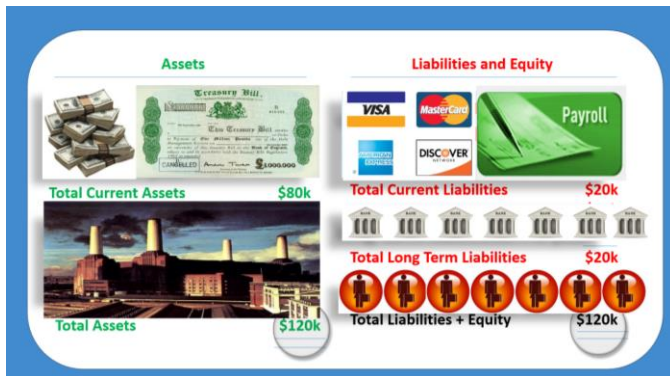
Long term liabilities are debts that you owe in greater than 1 year like a long term loan that is not due for a few years. Equity is just people that own your company including you!



Long term assets includes factories. If you can tell me what album cover is showed above in long term assets I will be very impressed!



Notice how I included many banks in the long term section. I am not encouraging you to take on too much debt. Rather, if you have to work with banks when your company is mature, then please work with a few so that you can make them compete to give you the best rates.



Please don't forget that the left side of the Balance Sheet (Assets) must always equal the right side of the Balance Sheet (Liabilities + Equity)

Assets		Liabilities and Equity	
Cash + marketable Securities	\$60k	Accounts payable	\$20k
Accounts receivable	\$0k	Accrued wages	\$0k
Inventory	\$20k	Short Terms Loans	\$0k
		Other Current Liabilities	\$0k
Total Current Assets	\$80k	Total Current Liabilities	\$20k
Equipment	\$40k	Long Term Loans	\$20k
Less: Accumulated Depreciation	\$0k	Leases	\$0k
Net Equipment	\$40k	Total Long Term Liabilities	\$20k
Building	\$0k		
Other Long-Term Assets	\$0k	Equity (\$ of company we own)	\$80k
Total Assets	\$120k	Total Liabilities + Equity	\$120k

how do we order bs items?

You order stuff on a balance sheet in the order of liquidity. Say what? This means the stuff that you can convert to cash first is listed first and the stuff you can convert to cash last you list last.

In the next image of assets, obviously the first thing you would list is cash. Notice the kids playing hockey on the back of the \$5 Canadian bill? How awesome is that!



order these assets:



Similarly, order liabilities on the balance sheet in the order that you have to pay them back. Credit cards go first as well as salaries payable.



order these liabilities:



What the heck is this lease stuff? I don't get it.

You lease something for accounting reasons. Huh? Well think of it like renting a machine. If you don't have enough money to buy a machine then you can lease or rent it.

what if i can't afford to buy machines?
i don't want to tie up too much capital!



i might want to cancel my machine payments...
if I buy machines then my debt will be too high
and the bank will punish me (d/e too high)!

INCOME STATEMENT

A: \$ total of stuff we sold

B: \$ amount it took us to sell the watches:

- ✓ how much it cost us to make the watches
 - ✓ marketing expenses
 - ✓ salaries of our employees
 - ✓ rent
- ✓ wear and tear on our equipment ["depreciation"]
- ✓ interest on our bank loan
- ✓ Taxes

$$A - B = \text{Net Income}$$

Recall that a balance sheet just tells you who owns your stuff (a bank or people that own part of your company., including you). How do I keep track of how much money I make and how much I need to pay in taxes? The answer is through the income statement.....the statement that explains to you how much income you make (and how we can pay as little tax as possible....great now the IRS is going to fn audit me)!

The income statement has 2 sections: A and B. A is the amount we sold our banana watches for. B is the cost to sell those bad ass watches! $A - B =$ our Net Income.

Sales [1000 watches sold for \$300 each]	\$300k
-Cost to make the watches we sold [1000 watches * \$200 each]	-\$200k
Gross profit	=\$100k
-Marketing expenses	-\$10k
-Employee expenses	-\$30k
-Rent expense	-\$17k
-Depreciation (wear and tear on our equipment)	-\$2k
Earnings before interest and taxes ["E.B.I.T."]	=\$41k
-Interest	-\$1k
Earnings before taxes	=\$40k
-Taxes [the tax rate is 25%]	-\$10k
Net Income	=\$30k

Let's walk through an income statement. At the top is always sales (which is the same thing as revenue). Accounting and finance nerds call this the 'top line'. They say stuff like "what is my top line growth". This means how fast is my revenue (or sales...same thing) growing. Then the bottom of the income statement is called net income or 'the bottom line' [of the income statement]. Accounting and finance nerds will say "what is my bottom line growth" which just means how much is my net income or profit (same thing) growing. The top line is at the top and the bottom line is at the bottom. Easy.

Sales minus the cost to make that product is called "Gross Profit" as dumb as that sounds. So with our banana watch, the cost to make that product includes the cost of all the little components inside of the watch.

Hold on a second. How do we 'account' for other expenses in our company like salaries and rent etc.? Well this is recorded after 'Gross Profit'. The cost of paying employees or research and development or rent or other stuff are the expenses you have associated with 'operating' your business. Ok so we will call these expenses 'operating expenses'. If you deduct the cost to operate your business from Gross Profit, then this is called 'Operating Profit' or E.B.I.T. EBIT stands for earnings before interest and taxes.

Why the heck do we have to learn about EBIT? This sucks. Why don't you just look at net income? Because all companies pay a different tax rate and have different interest amounts. Therefore we might want to compare our company to our competition or other companies that are similar. We know that their expenses are similar but their tax or interest they pay are all massively different. Huh? Well we have a few

competitors in Switzerland that claim that they make better watches than we do (what the heck do the Swiss know aboooot watches anyway?). The tax rate is way different in Switzerland. We have a potential investor in our company that is also an investor in a few Swiss watch companies. He is looking at our financial statements now and he wants an “apples to apples” comparison of our company to the Swiss companies. Ok cool – he will compare the EBIT of those companies to our EBIT because the tax rates are wildly different for different companies.

For some dumb reason, expenses below EBIT (also called Operating Profit) are called ‘below the line items’. These items include taxes or interest. Once you deduct taxes and interest payments (or interest income) from Operating Profit (also called EBIT), then you get the bottom line, which is called Net Income or Net Profit.....think if this as Profit or Income ‘net of all expenses.’

Cool. I get it. So I see that our net income is \$30k.

does this mean our cash balance
should increase by \$30,000?



No our cash balance doesn't go up by \$30k. But Chris you said our net income was \$30k so of course I have \$30k more now right? No you might have more than this (or less)!!!! How awesome. Pennies from heaven!

www.tiny.cc/chris58

On our income statement there is \$2k in ‘depreciation’ (also called wear and tear) that we paid....but wait we didn't actually pay. So we have more than \$30k? Maybe...

Let's add back the wear and tear on our equipment that we deducted in our income statement. This is called depreciation and we get to add it back to our cash flow statement because we never paid \$2k out of our pocket! Why did we deduct it then in our income statement? Because the government wants you to invest in your company through having the most bad ass and newest equipment. The government incentivizes you by letting you deduct the wear and tear from your pre-tax income so you pay less tax!

Cash Flow from Operation

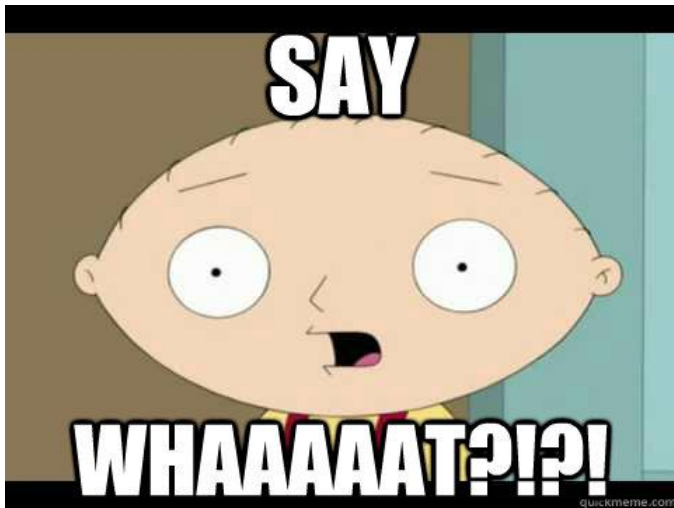
Net Income	\$30k
+Increase in Depreciation	+\$2k
-Increase in Accounts receivable	-\$10k

Cash Flow from Operation

Net Income	\$30k
+Increase in Depreciation	+\$2k
-Increase in Accounts receivable	-\$10k
+Increase in Accounts payable	+\$20k

From the assets section of the balance sheet we saw an item called 'accounts receivable', which is accounting nerd talk for money that is owed to us....think of it like money owed to us by a customer. Sometimes we sell stuff and we tell the customer, just pay us later or within 30 days (we are desperate to sell stuff sometimes). Well we didn't get that money yet so we need to deduct it from our net income (or what we think we have for cash on hand).

From the liabilities section of the balance sheet we saw an item called 'accounts payable'. This means money we haven't paid yet to (for example) a credit card company or employees. Since we haven't paid for this item yet but we accounted for it, we add it back to our cash balance.



In fact, you always want to pay back debts as late as you can (assuming you don't get penalized through interest payments). Why? Because in accounting everyone thinks of people they do business with as banks.

Everyone wants to pay everyone else back as late as possible without incurring late expenses as this is always economically beneficial (you earn a bit of interest in the bank if you pay bills right before they are due).

Cool. Ok so instead of making \$30k in net income we actually made \$42k from operating our business; this cash flow statement stuff rocks! You are thinking that you actually hate accounting a little bit

Cash Flow from Operation

Net Income	\$30k
+Increase in Depreciation	+\$2k
-Increase in Accounts receivable	-\$10k
+Increase in Accounts payable	+\$20k
<u>A=Net cash flow from operations</u>	<u>=\$42k</u>

Cash Flow from Operation

Net Income	\$30k
+Increase in Depreciation	+\$2k
-Increase in Accounts receivable	-\$10k
+Increase in Accounts payable	+\$20k
<u>A=Net cash flow from operations</u>	<u>=\$42k</u>

Cash Flow from Investing

-Increase in equipment	-\$40k
<u>B=Net cash flow from investing</u>	<u>=\$-40k</u>

less now (just a little bit).....but wait, there's more!!!!

We invested in buying equipment to make our watches faster. This cost us \$40k in cash.

<u>Cash Flow from Operation</u>	
Net Income	\$30k
+Increase in Depreciation	+\$2k
-Increase in Accounts receivable	-\$10k
+Increase in Accounts payable	+\$20k
<u>A=Net cash flow from operations</u>	<u>=+\$42k</u>
<u>Cash Flow from Investing</u>	
-Increase in equipment	-\$40k
<u>B=Net cash flow from investing</u>	<u>=-\$40k</u>
<u>Cash Flow from Financing</u>	
+Increase in Loans	+\$20k
<u>C=Net cash flow from financing</u>	<u>+=+\$20k</u>

We also got a loan this month so add \$20k

<u>Cash Flow from Operation</u>	
Net Income	\$30k
+Increase in Depreciation	+\$2k
-Increase in Accounts receivable	-\$10k
+Increase in Accounts payable	+\$20k
<u>A=Net cash flow from operations</u>	<u>+=+\$42k</u>
<u>Cash Flow from Investing</u>	
-Increase in equipment	-\$40k
<u>B=Net cash flow from investing</u>	<u>=-\$40k</u>
<u>Cash Flow from Financing</u>	
+Increase in Loans	+\$20k
<u>C=Net cash flow from financing</u>	<u>+=+\$20k</u>
<u>A+B+C=TOTAL net change in cash</u>	<u>+=+\$22k</u>

<u>Cash Flow from Operation</u>	
Net Income	\$30k
+Increase in Depreciation	+\$2k
-Increase in Accounts receivable	-\$10k
+Increase in Accounts payable	+\$20k
<u>A=Net cash flow from operations</u>	<u>+=+\$42k</u>
<u>Cash Flow from Investing</u>	
-Increase in equipment	-\$40k
<u>B=Net cash flow from investing</u>	<u>=-\$40k</u>
<u>Cash Flow from Financing</u>	
+Increase in Loans	+\$20k
<u>C=Net cash flow from financing</u>	<u>+=+\$20k</u>
<u>A+B+C=TOTAL net change in cash</u>	<u>+=+\$22k</u>
+Beginning cash balance	+\$60k

Ok so we actually make \$22k in net cash.

Cash Flow from Operation

Net Income	\$30k
+Increase in Depreciation	+\$2k
-Increase in Accounts receivable	-\$10k
+Increase in Accounts payable	+\$20k
<u>A=Net cash flow from operations</u>	<u>=\$42k</u>

Cash Flow from Investing

-Increase in equipment	-\$40k
<u>B=Net cash flow from investing</u>	<u>=\$-40k</u>

Cash Flow from Financing

+Increase in Loans	+\$20k
<u>C=Net cash flow from financing</u>	<u>=\$20k</u>
A+B+C=TOTAL net change in cash	=\$22k
+Beginning cash balance	+\$60k
<u>=Ending cash balance</u>	<u>=\$82k</u>

The balance sheet told us that we already had \$60k....no we now have \$82k in cash!

how are all 3 financial statements related?

There is a link between the 3 financial statements as show in the previous graphic. The income statement talks to the balance sheet because net income is also in the balance sheet's equity section. The balance sheet talks to the cash flow statement as beginning cash is on both statements. The cash flow statement talks to the income statement as both have net income reflected.

cash flow statement

Cash Flow from Operation	
Net Income	\$30k
+Increase in Depreciation	+\$2k
-Increase in Accounts receivable	-\$10k
+Increase in Accounts payable	+\$20k
A=Net cash flow from operations	=\$42k

Cash Flow from Investing	
-Increase in equipment	-\$40k
B=Net cash flow from investing	=\$-40k

Cash Flow from Financing	
+Increase in Loans	+\$20k
C=Net cash flow from financing	=\$+20k

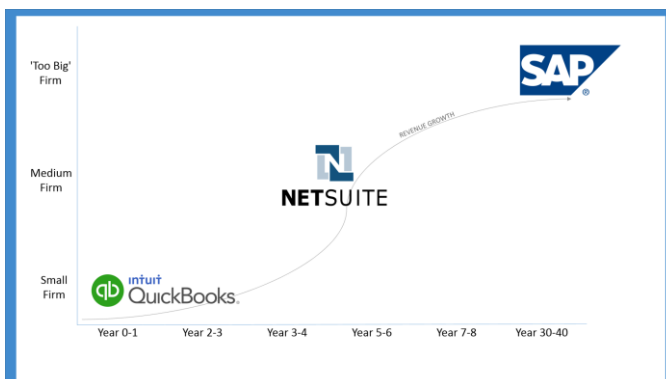
A+B+C=TOTAL net change in cash	=\$+22k
+Beginning cash balance	+\$60k
=Ending cash balance	=\$82k

income statement

Sales [1000 watches sold for \$300 each]	\$300k
-Cost to make the watches we sold [1000 watches * \$200 each]	-\$200k
Gross profit	=\$100k
-Marketing expenses	-\$10k
-Employee expenses	-\$30k
-Rent expense	-\$17k
-Depreciation (wear and tear on our equipment)	-\$2k
Earnings before interest and taxes ["E.B.I.T."]	=\$41k
-Interest	-\$1k
Earnings before taxes	=\$40k
-Taxes [the tax rate is 25%]	-\$10k
Net Income	=\$30k

balance sheet

Assets		Liabilities and Equity	
Cash + marketable Securities	\$60k	Accounts payable	\$20k
Accounts receivable	\$0k	Accrued wages	\$0k
Inventory	\$20k	Short Terms Loans	\$0k
		Other Current Liabilities	\$0k
Total Current Assets	\$80k	Total Current Liabilities	\$20k
Equipment	\$40k	Long Term Loans	\$20k
Less: Accumulated Depreciation	\$0k	Leases	\$0k
Net Equipment	\$40k	Total Long Term Liabilities	\$20k
Building	\$0k	Equity (\$ of company we own)	\$80k
Other Long-Term Assets	\$0k	Total Liabilities + Equity	\$120k
Total Assets	\$120k		



Ok no more financial statement talk! (Yay!)

In reality you use software to do all that accounting stuff for you. If you are a small firm, I recommend and have used QuickBooks a lot. It is so awesome as all you do is enter in money made and money owed and QuickBooks makes a gazillion financial statements for you! I even had QuickBooks automatically pay my employees and automatically

send taxes when due at both the state and federal level! When you have a firm with a few hundred employees then you graduate from using QuickBooks to using NetSuite which is all cloud based. Then when you are a massive 'too big' firm, you use accounting software from a bigger firm like SAP or Oracle.

FINANCIAL RATIOS

financial ratios

(understanding them...not memorizing them)

Understand financial ratios and never memorize them or you will be bored to tears learning this stuff. www.tiny.cc/chris59**please don't be stubborn...take time to understand financial ratios :)**





why do we care about financial ratios?

3 reasons

1: so **equity** investors can decide to invest or they can assess investment performance



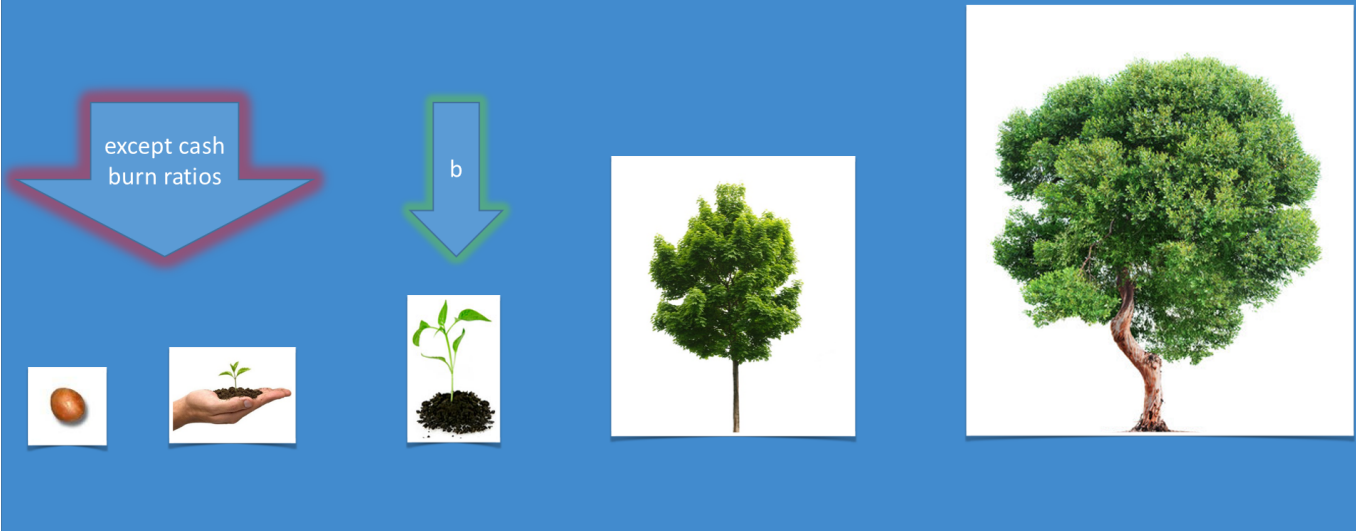
2: so **lenders** can decide to lend or they can assess loan performance



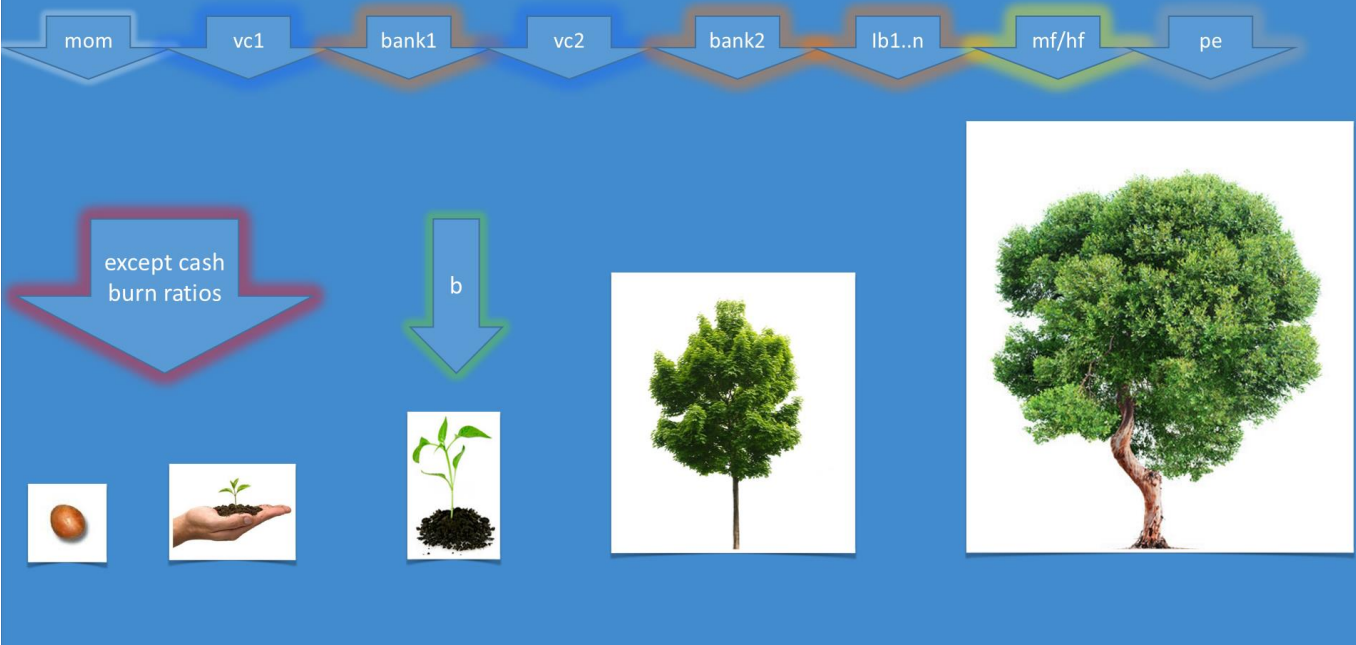
3: so business owners can track performance



ratios are less important until the B round.



ratios are less important until the B round.



The only ratio we really care about when we start a company is the monthly cash burn rate....or how much cash we spend each month. Then closer to the B venture capital round when we are actually selling our product, then we have more financial data to analyze and apply ratio analytics to.

let's analyze trends & ratios for



learn to enjoy reading financials like a good



I know it sounds nerdy, but learn to enjoy reading financials like a good book. Looks for trends in the data. One data point does not make a trend, but multiple data points do...this is what Wall Street Analysts do! They look for trends! Fun!

INCOME STATEMENT ANALYSIS

	<u>Year 1</u>		<u>Year 2</u>	
Sales	\$800k	25% yoy growth	\$1000K	
-Cost of goods sold	-\$520k		-\$660k	
Gross profit	=\$280k	35% of sales to 34%	=\$340k	🚩
-Marketing expenses	-\$80k	10% of sales to 11%	-\$110k	🚩
-Employee expenses	-\$58k	7.3% of sales to 6.8%	-\$68k	
-Rent expense	-\$36k	4.5% of sales to 4.7%	-\$47k	
-Depreciation	-\$26k	3.2% of sales to 2.9%	-\$29k	
E.B.I.T.	=\$80k	10% of sales to 8.6%	=\$86k	🚩
-Interest	-\$22k	2.7% of sales to 3.4%	-\$34k	
Earnings before taxes	=\$58k	7.3% of sales to 5.2%	=\$52k	🚩
-Taxes [the tax rate is 30%]	-\$18k		-\$16k	
Net Income	=\$41k	<u>5.1% sales to 3.6%</u>	=\$36k	🚩

Cool. Let's look for trends in our income statement. It looks like revenue is growing at a healthy 25% rate YoY (year over year). Let's look at everything on this income statement as a percent of revenue. In fact, the most important thing to keep in mind is analyzing everything in finance as a percent of revenue (much more on that later).

Aha! We found a number of red flags or problems with our company. Our gross profit as a percent of revenue was 35% last year and it is only 34% now. Ouch – our profitability on selling our stuff is going down as a percent of revenue. Many line items as a percent of revenue are rising. I see a lot of red flags here.

BALANCE SHEET ANALYSIS

	Year 1	Year 2	
Assets			
Cash + marketable Securities	\$60k	\$40k	-\$20mn...deadly... what is happening?
Accounts receivable	\$0k	\$0k	
Inventory	\$20k	\$130k	+\$110mn...why is inventory up?
Total Current Assets	\$80k	\$170k	
Equipment	\$40k	\$50k	
Less: Accumulated Depreciation	\$0k	\$10k	
Net Equipment	\$40k	\$40k	
Building	\$0k	\$0k	
Other Long-Term Assets	\$0k	\$0k	
Total Assets	\$120k	\$210k	
Liabilities and Equity			
Accounts payable	\$20k	\$20k	
Accrued wages	\$0k	\$0k	
Short Terms Loans	\$0k	\$20k	+\$20mn...looks like loans are
Other Current Liabilities	\$0k	\$0k	financing the inventory (bad)
Total Current Liabilities	\$20k	\$40k	
Long Term Loans	\$20k	\$60k	+\$40mn....loans financing inventory
Leases	\$0k	\$0k	spike and not net income (bad)
Total Long Term Liabilities	\$20k	\$60k	
Equity (\$ of company we own)	\$80k	\$110k	+\$30mn: note that we had \$30mn in...
Total Liabilities + Equity	\$120k	\$210k	...net income on our income statement

Oh no....there are many issues with our balance sheet. Cash is down \$20 but our inventory is up \$110! So our assets are up \$90 but due to an inventory spike? Recall that Assets = Liabilities + Equity. So what went up \$90 in the Liabilities and Equity section? Well it looks like we are financing our \$90 increase through a combination of short term loans (\$20) + long terms loans (\$40) + our \$30 in net income. Disaster. We are burning through too much cash!!!!







liquidity ratios:
measure our ability
to pay short term debt
(can we get a loan?)

Liquidity is a term that means how fast can we turn our stuff into cash...or how liquid we are. Banks and investors analyze liquidity ratios a lot to determine whether or not they will finance or lend us money.

current ratio =
$$\frac{\text{current assets}}{\text{current liabilities}}$$

if > 1 then banks think
you can pay your bills.

Recall that current assets are stuff we can convert to cash in less than 1 year and current liabilities are debt due in less than a year. Banks love looking at the current ratio...or the ratio of current assets to current liabilities. If the number is >1 then they feel that you can pay back your debts. Don't memorize this...understand it.

However, if your company has inventory (unsold products) then it's not fair to look at the current ratio. Why? Because current assets includes inventory. Why should we benefit in the current ratio from a high current assets amount if our inventory levels are too high?



a massive recall was just announced on our
banana watch as it doesn't work when it is
over 70% outside and if it is under 60% outside!

....this is a HUGE problem for us as the current ratio uses
current assets (which includes inventory) in its calculation!

Shute. The banana watches we just made have a massive recall! The watches don't work if the temperature is above 70 degrees or under 60 degrees. Damn it we forgot to account for this when we made the watches! We thought people only use watches inside...

The bank now thinks that the current ratio is misleading because of our massive inventory position given the recall. Well how can the bank assess our company now that the previous ratio is useless?

solution?

the “quick ratio” is like the current ratio...
....except it ignores inventory if needed!

quick ratio =
 $(\text{current assets} - \text{inventory}) / \text{current liabilities}$
is not > 1 (oh no!)

“when you combine ignorance and leverage,
you get some pretty interesting results.”

- warren buffet

Oh boy, we are in BIG trouble now as the quick ratio is not more than 1. Oh no are we in trouble????

www.tiny.cc/chris60 .

debt to total assets
= $\text{debt} / \text{assets}$

Banks will analyze your business by looking at the
ratio of how much debt you have to your assets.

other ratios

ROA = $\text{net income} / \text{assets}$

ROE = $\text{net income} / \text{equity}$

interest coverage

= $\text{EBITDA} / \text{interest}$

Lenders also want to make sure that you have enough operating profit (also called EBIT or EBITDA) to cover your interest payments. Lenders want you to be able to make enough money to cover your interest payments many times over. EBITDA is just like EBIT but it stands for Earnings Before I Tricked Dumb Accountant. Kidding of course. It actually stands for Earnings Before Interest, Depreciation and Amortization. The A in EBITDA accounts for when you overpay for an acquisition (for example) and you want to depreciate it like you depreciate equipment.

Questions Based on Chapter 6:

1: On the balance sheet:

- a) $\text{Assets} + \text{Liabilities} = \text{Equity}$
- b) $\text{Assets} + \text{Long Term Debt} = \text{Equity}$
- c) $\text{Assets} = \text{Liabilities} + \text{Equity}$
- d) $\text{Assets} + \text{Equity} = \text{Liabilities}$

2: On the income statement:

- a) $\text{Sales} - \text{Expenses} = \text{Assets}$
- b) $\text{Sales} - \text{Assets} = \text{Equity}$
- c) $\text{Sales} - \text{Expenses} = \text{Net Income}$
- d) $\text{Sales} - \text{Depreciation} = \text{Liabilities}$

3: On the cash flow statement:

- a) Depreciation is subtracted from net income.
- b) Depreciation is added to net income.
- c) The net income is not the same as net income on the income statement.
- d) The net income is always the same as the current assets balance.

4: The current ratio is:

- a) $\text{Current assets} / \text{current liabilities}$
- b) $\text{Current liabilities} / \text{current assets}$
- c) $\text{Current assets} - \text{inventory} / \text{current liabilities}$
- d) $\text{Current liabilities} - \text{inventory} / \text{current assets}$

5: The interest coverage ratio:

- a) Measures how many times your EBITDA (also called operating profit) can cover or pay your accounts payable.
- b) Measures how many times your EBITDA (also called operating profit) can cover or pay your interest expense.
- c) Measures how many times your net income (also called operating profit) can cover or pay your interest expense.

Measures how many times your net income (also called operating profit) can cover or pay your accounts payable.

CHAPTER SUMMARY

